

SEQUENCE LISTING

5 <110> Weiss, Stefan

Little, Melvyn

Knackmuss, Stefan

10

Rey, Clémence

Büttner, Claudia

15

Röttgen, Peter

Reusch, Uwe

20

<120> Single-chain antibodies against the 37 kDa/67
kDa laminin receptor as tools for the diagnosis and
therapy of prion diseases, production and use

25 <130> 14620/CH/ajk

<140> PCT/EP2004/011268

30

<141> 2004-10-08

<160> 4

5 <170> PatentIn version 3.1

<210> 1

10

<211> 816

<212> DNA

15 <213> artificial sequence

<220>

20

<223> DNA codes for single-chain antibody scFv S18. It is contained in

the plasmid pEX/HAM/LRP-S18. This plasmid was deposited in the DSMZ,

25 Mascheroder Weg 1b, D-38124 under the accession number xxxx. After

transformation of the plasmid in E.coli XL1-Blue, the production of

the scFv antibody S18 is possible.

30

<400> 1

caggtgcagc tgcaggagtc tgggggaggc ttggtacagc ctgggggggtc
cctgagactc 60

tcctgtgcag cctctggatt catgtttagc aggtatgcc ttagctgggt
ccgccaggct 120

ccaggggaagg ggccagagtg ggtctcaggt attagtggta gtggtggtag
5 tacatactac 180

gcagactccg tgaagggccg gttcaccgtc tccagagaca attccaagaa
cacgctgtat 240

10 ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc
gagacatccg 300

ggtttttggc attttgacta ctggggccag ggaactctgg tcaccgtctc
ctcagggagt 360

15 gcatccgccc caaagcttga agaaggtgaa ttttcagaag cacgcgtatc
tgaactgact 420

caggaccctg ctgtgtctgt ggccttggga cagacagtca ggatcacatg
20 ccaaggagac 480

agcctcagaa acttttatgc aagctggtag cagcagaagc caggacaggc
ccctactctt 540

25 gtcattctatg gtttaagtaa aaggccctca gggatcccag accgattctc
tgccctccagc 600

tcaggaaaca cagcttcctt gaccatcact ggggctcagg cggaagatga
ggctgactat 660

30 tactgtaact cccgggacag aagtggtaat catgtaaatg tgctattcgg
cggaggggacc 720

aagctgaccg tcctacgtca gcccaaggct gcccctcgg tcactctgtt
35 cccgccctct 780

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu
Trp Val

35

40

45

5

Ser Gly Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp
Ser Val

50

55

60

10

Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys Asn Thr
Leu Tyr

65

70

75

80

15

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr
Tyr Cys

85

90

20 95

Ala Arg His Pro Gly Phe Trp His Phe Asp Tyr Trp Gly Gln
Gly Thr

100

105

110

25

Leu Val Thr Val Ser Ser Gly Ser Ala Ser Ala Pro Lys Leu
Glu Glu

115

120

125

30

Gly Glu Phe Ser Glu Ala Arg Val Ser Glu Leu Thr Gln Asp
Pro Ala

130

135

140

35

Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys Gln
Gly Asp
145 150 155
5 160
Ser Leu Arg Asn Phe Tyr Ala Ser Trp Tyr Gln Gln Lys Pro
Gly Gln
165 170
10 175
Ala Pro Thr Leu Val Ile Tyr Gly Leu Ser Lys Arg Pro Ser
Gly Ile
15 180 185 190
Pro Asp Arg Phe Ser Ala Ser Ser Ser Gly Asn Thr Ala Ser
Leu Thr
20 195 200 205
Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys
Asn Ser
25 210 215 220
Arg Asp Arg Ser Gly Asn His Val Asn Val Leu Phe Gly Gly
Gly Thr
30 225 230 235
240
Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala Pro Ser Val
Thr Leu
35 245 250

255

Phe Pro Pro Ser Ser Ala Ala Ala Gly Ser His His His His
5 His His

260

265

270

<210> 3

10

<211> 834

<212> DNA

15 <213> artificial sequence

<220>

20

<223> DNA codes for single-chain antibody scFv N3. The
DNA is contained

in the plasmid pEX/HAM/LRP-N3. This plasmid was
deposited in the

25 DSMZ, Mascheroder Weg 1b, D-38124 under the
accession number xxxx.

After transformation of the plasmid in E.coli
XL1-Blue, the production of the scFv antibody N3 is
possible.

30

<400> 3

gaagtgcagc tgggtggagtc tggggggaggc gtggtccagc ctgggaggtc
cctgagactc 60

tctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt
ccgccaggct 120

ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa
5 taaatactat 180

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa
cacgctgtat 240

10 ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc
gactataccg 300

cgctcgtctt tctactacgg tatggacgtc tggggccaag ggaccacggt
cacgctctcc 360

15 tcagggagtg catccgcccc aacccttaag cttgaagaag gtgaattttc
agaagcacgc 420

gtacagcctg tgctgactca gccaccctca gcgtctggga ccccagggca
20 gagggtcacc 480

atctcttggt ctggaagcag atccaacatc ggaagtaata ctgtaaactg
gtaccagcag 540

25 ctcccaggaa cggcccccaa actcctcatc tatggtaata atcagcggcc
ctcaggggtc 600

cctgagcgat tctctggctc caagtctggc acctcagcct ccctggccat
cagtgggctc 660

30 cagtcagagg atgaggctga ttattactgt gcagcgtggg atgacagcct
gactggtgtg 720

cttttcggcg gagggaccaa gctgaccgtc ctaggtcagc ccaaggctgc
35 cccctcggtc 780

actctgttcc cgccctcttc tgcggccgct ggatcccatc accatcacca
tcac 834

5

<210> 4

<211> 278

10 <212> PRT

<213> artificial sequence

15

<220>

<223> This protein corresponds to the single-chain
antibody N3. It can

20 be synthesized in E.coli XL1-Blue after
transformation of the plasmid pEX/HAM/LRP-N3.

<400> 4

25 Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro
Gly Arg

1

5

10

15

30 Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser
Ser Tyr

20

25

30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu
Trp Val

35

40

45

5

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp
Ser Val

50

55

60

10

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr
Leu Tyr

65

70

75

80

15

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr
Tyr Cys

85

90

20 95

Ala Thr Ile Pro Arg Ser Ser Phe Tyr Tyr Gly Met Asp Val
Trp Gly

25

100

105

110

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser Ala Ser Ala
Pro Thr

30

115

120

125

Leu Lys Leu Glu Glu Gly Glu Phe Ser Glu Ala Arg Val Gln
Pro Val

35

130

135

140

Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg
Val Thr
5 145 150 155
160
Ile Ser Cys Ser Gly Ser Arg Ser Asn Ile Gly Ser Asn Thr
10 Val Asn
165 170
175
15 Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile
Tyr Gly
180 185 190
20 Asn Asn Gln Arg Pro Ser Gly Val Pro Glu Arg Phe Ser Gly
Ser Lys
195 200 205
25 Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser
Glu Asp
210 215 220
30 Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Thr
Gly Val
225 230 235
240

Leu Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro
Lys Ala

245

250

255

5

Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Ala Ala Ala
Gly Ser

260

265

270

10

His His His His His His

275

15